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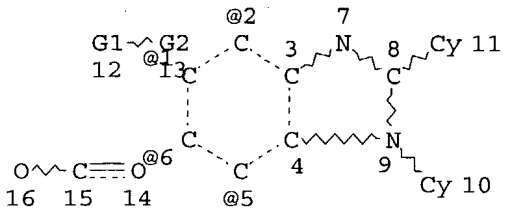

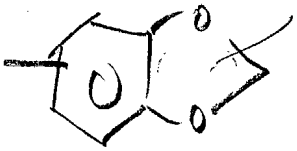

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VAR G2=2/1/6/5
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

=> s l3 ful
FULL SEARCH INITIATED 10:49:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 68625 TO ITERATE

100.0% PROCESSED 68625 ITERATIONS 294 ANSWERS
SEARCH TIME: 00.00.02

L5 294 SEA SSS FUL L3

=> fil caplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	157.10	157.31

FILE 'CAPLUS' ENTERED AT 10:49:08 ON 23 FEB 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 23 Feb 2004 VOL 140 ISS 9
FILE LAST UPDATED: 22 Feb 2004 (20040222/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l5

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L6          14 L5

=> s l6 and py<2000
      19722118 PY<2000
L7           2 L6 AND PY<2000

=>

=> d bib abs hitstr 1-2

L7   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1997:594631  CAPLUS
DN   127:262677
TI   Methods of treating or preventing sleep apnea using di- and trisubstituted
     benzimidazoles
IN   Gitter, Bruce D.; Iyengar, Smriti
PA   Eli Lilly and Co., USA; Gitter, Bruce D.; Iyengar, Smriti
SO   PCT Int. Appl., 117 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE           APPLICATION NO.   DATE
     ---------------    ----  --------       ---------------   --------
PI   WO 9731635          A1   19970904       WO 1997-US3113    19970226 <--
         W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,
             LC, LK, LR, LS, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, YU,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,
             GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,
             ML, MR, NE, SN, TD, TG
     AU 9721390          A1   19970916       AU 1997-21390     19970226 <--
     US 6030992          A    20000229       US 1998-142026    19980827
PRAI US 1996-12665P      P    19960301
     WO 1997-US3113      W    19970226
OS   MARPAT 127:262677
GI
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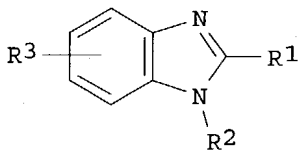
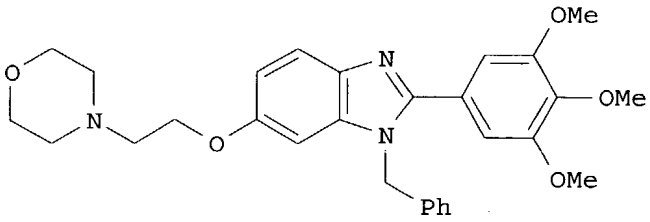


I



II

AB This invention provides methods for the treatment or prevention of sleep apnea (no data) using substituted benzimidazoles I [R1, R2 = H, alkyl, alkoxy, (un)substituted heterocyclyl, phenylalkoxy, phenylalkylidenyl, heterocyclylalkoxy, etc.; R3 = H, NO2, alkanoyl, alkyl, alkoxy, halo, (un)substituted amino, heterocyclyl, heterocyclylalkoxy, hydroxyalkyl,

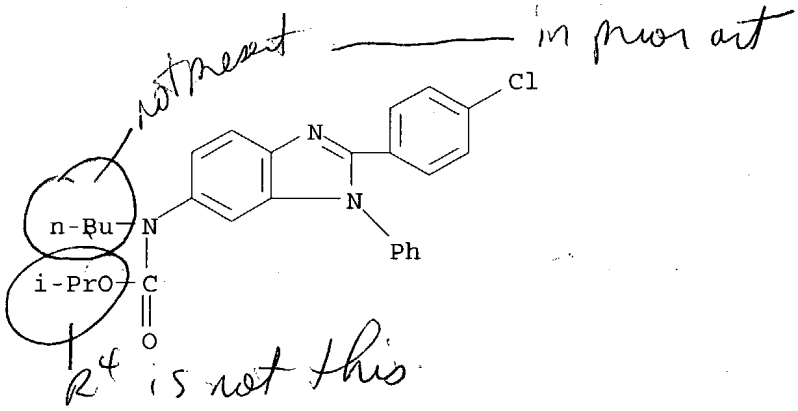
etc.; provided that both of R1 and R2 cannot be H] and their pharmaceutically acceptable salts or solvates. Examples include 174 syntheses of I, including both the preferred amine-containing target compds., and other compds. I serving primarily as intermediates. Eleven pharmaceutical formulations are also given. For instance, the intermediate compound I.HCl [R1 = 3,4,5-trimethoxyphenyl; R2 = CH2Ph; R3 = 6-OH] (prepared in 3 steps from 4-amino-3-nitrophenol) was etherified with 4-(2-chloroethyl)morpholine-HCl using K2CO3 in acetone to give a preferred title compound, II.

IT **196105-53-0P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug and/or intermediate; preparation of benzimidazoles for treatment or prevention of sleep apnea)

RN 196105-53-0 CAPLUS

CN Carbamic acid, butyl[2-(4-chlorophenyl)-1-phenyl-1H-benzimidazol-6-yl]-, 1-methylethyl ester (9CI) (CA INDEX NAME)



L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:737335 CAPLUS

DN 123:143893

TI Preparation of benzimidazoles as prostacyclin PGI2 mimetics.

IN Kuhnke, Joachim; Eckle, Emil; Thierauch, Karl-Heinz; Verhallen, Peter

PA Schering A.-G., Germany

SO Ger. Offen., 10 pp.
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

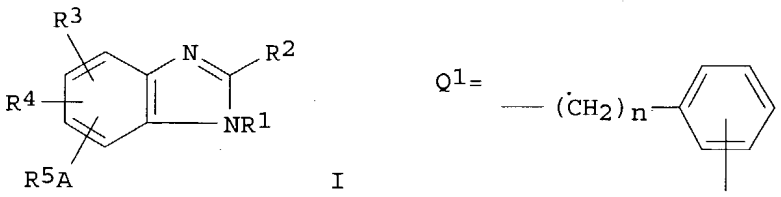
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4330959	A1	19950316	DE 1993-4330959	19930909 <--
WO 9507263	A1	19950316	WO 1994-EP2948	19940906 <--

W: JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRAI DE 1993-4330959 19930909

OS MARPAT 123:143893

GI

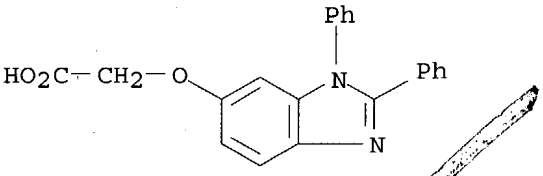


I

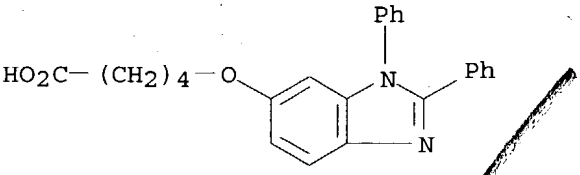
AB Title compds. [I; R1, R2 = (substituted) Ph, heteroaryl; R3, R4 = H, halo, alkyl, perfluoroalkyl, alkoxy, perfluoroalkoxy, carboxyl, alkoxycarbonyl, NO2, amino, etc.; A = bond, (O- or S-interrupted) alkylene, alkenylene, alkynylene, Q1; n = 1-4; R5 = carboxyl, SO3H, PO3H2, tetrazolyl], were prepared as PGI2 mimetics and TXA2/PGH2 antagonists useful in treating thrombosis, arteriosclerosis, and hyperlipidemia (no data). Thus, 1,2-diphenyl-1H-benzimidazol-6-ol, MeO2CCH2Br, and K2CO3 were refluxed 3 h in acetone to give Me [(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]acetate, which was stirred 24 h in a mixture of aqueous NaOH, THF, and MeOH to give [(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]acetic acid.

IT **166396-70-9P 166396-71-0P 166396-72-1P**
166396-73-2P 166396-74-3P 166396-75-4P
166396-76-5P 166396-77-6P 166396-78-7P
166396-79-8P 166396-80-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of benzimidazoles as prostacyclin PGI2 mimetics)

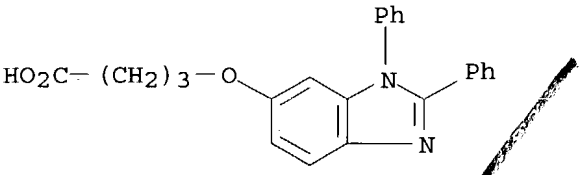
RN 166396-70-9 CAPLUS
CN Acetic acid, [(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]- (9CI) (CA INDEX NAME)



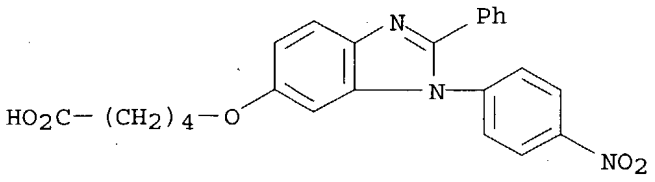
RN 166396-71-0 CAPLUS
CN Pentanoic acid, 5-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]- (9CI) (CA INDEX NAME)



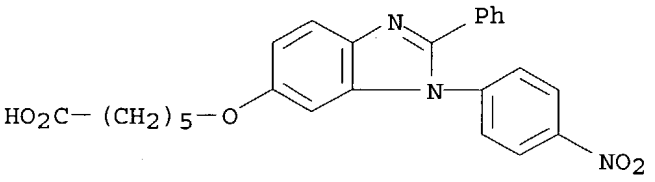
RN 166396-72-1 CAPLUS
CN Butanoic acid, 4-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]- (9CI) (CA INDEX NAME)



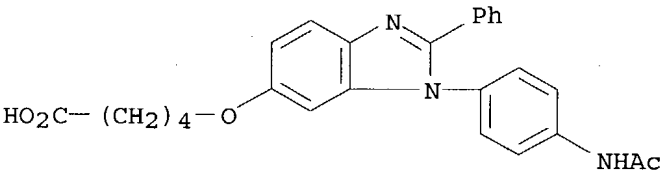
RN 166396-73-2 CAPLUS
CN Pentanoic acid, 5-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



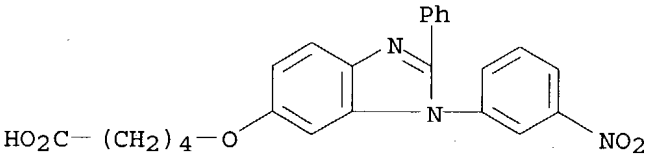
RN 166396-74-3 CAPLUS
CN Hexanoic acid, 6-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



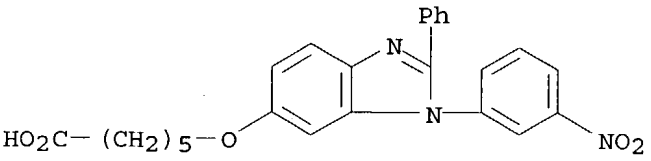
RN 166396-75-4 CAPLUS
CN Pentanoic acid, 5-[[1-[4-(acetylamino)phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



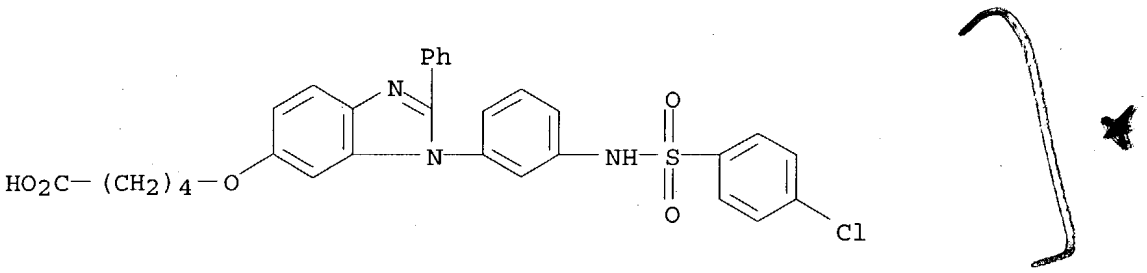
RN 166396-76-5 CAPLUS
CN Pentanoic acid, 5-[[1-(3-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



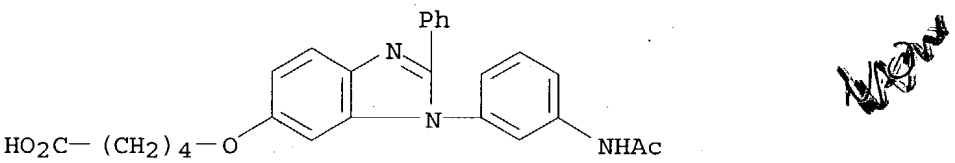
RN 166396-77-6 CAPLUS
CN Hexanoic acid, 6-[[1-(3-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



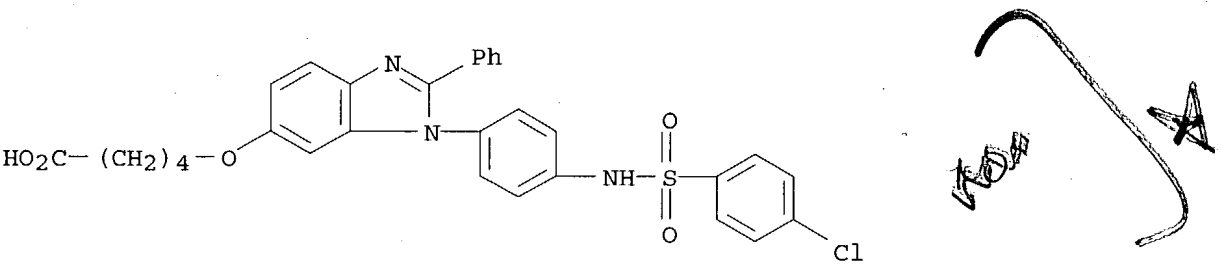
RN 166396-78-7 CAPLUS
CN Pentanoic acid, 5-[[1-[3-[[(4-chlorophenyl)sulfonyl]amino]phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



RN 166396-79-8 CAPLUS
CN Pentanoic acid, 5-[[1-[3-(acetylamino)phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)

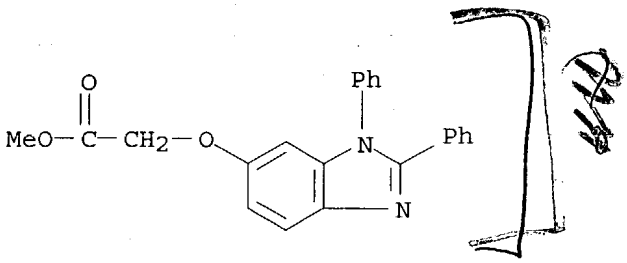


RN 166396-80-1 CAPLUS
CN Pentanoic acid, 5-[[1-[4-[[(4-chlorophenyl)sulfonyl]amino]phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)

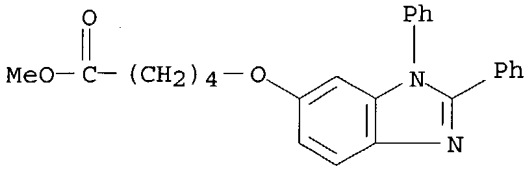


IT **166396-81-2P 166396-82-3P 166396-83-4P**
166396-84-5P 166396-85-6P 166396-86-7P
166396-87-8P 166396-90-3P 166396-91-4P
166396-92-5P 166396-93-6P 166396-94-7P
166396-95-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of benzimidazoles as prostacyclin PGI2 mimetics)

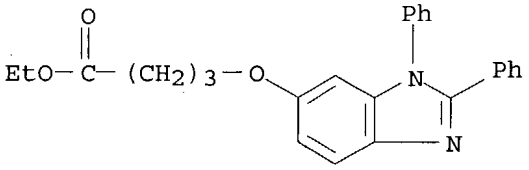
RN 166396-81-2 CAPLUS
CN Acetic acid, [(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]-, methyl ester (9CI) (CA INDEX NAME)



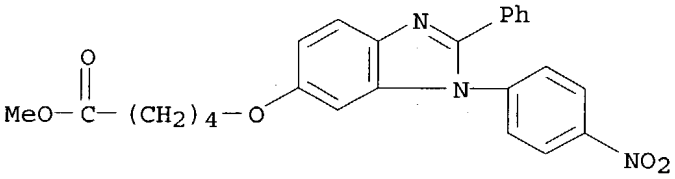
RN 166396-82-3 CAPLUS
CN Pentanoic acid, 5-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]-, methyl ester (9CI) (CA INDEX NAME)



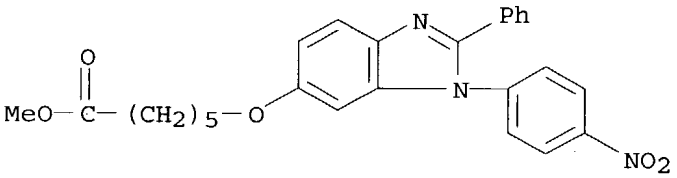
RN 166396-83-4 CAPLUS
CN Butanoic acid, 4-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]-, ethyl ester (9CI) (CA INDEX NAME)



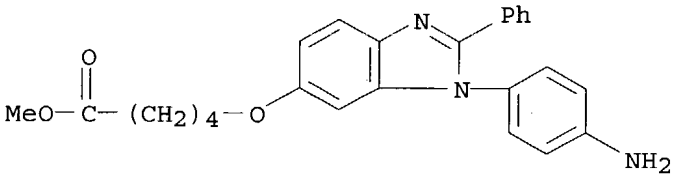
RN 166396-84-5 CAPLUS
CN Pentanoic acid, 5-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



RN 166396-85-6 CAPLUS
CN Hexanoic acid, 6-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)

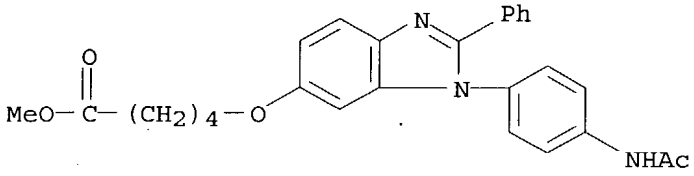


RN 166396-86-7 CAPLUS
CN Pentanoic acid, 5-[[1-(4-aminophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)

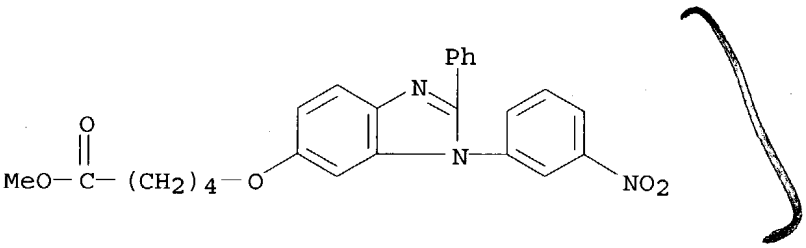


● HCl

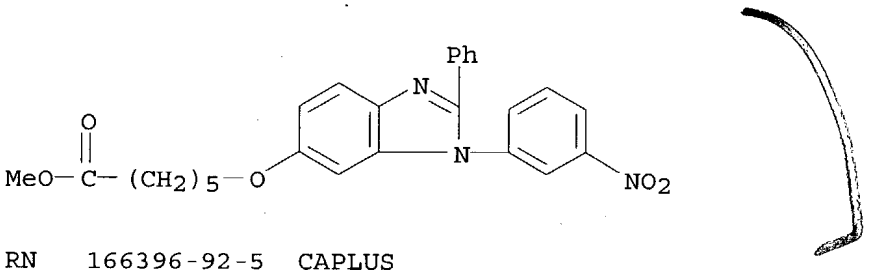
RN 166396-87-8 CAPLUS
CN Pentanoic acid, 5-[[1-[4-(acetylamino)phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



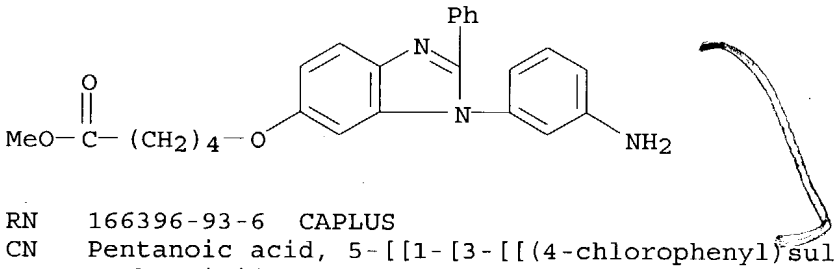
RN 166396-90-3 CAPLUS
CN Pentanoic acid, 5-[[1-(3-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



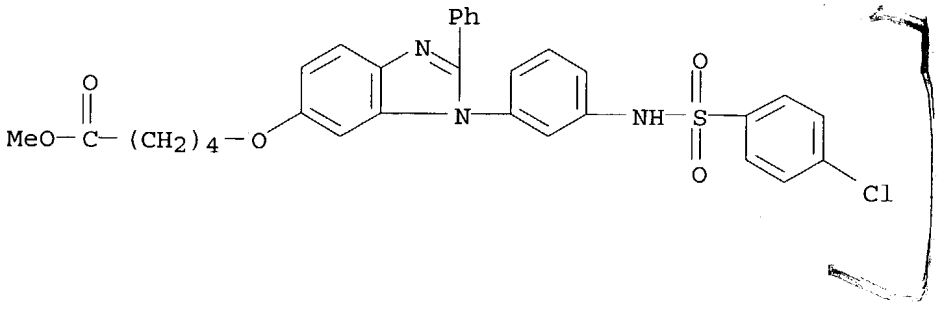
RN 166396-91-4 CAPLUS
CN Hexanoic acid, 6-[[1-(3-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



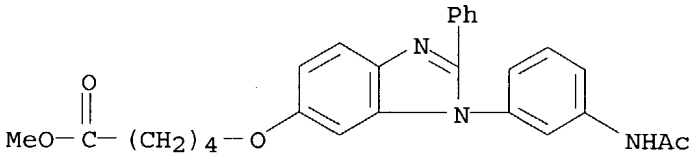
RN 166396-92-5 CAPLUS
CN Pentanoic acid, 5-[[1-(3-aminophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



RN 166396-93-6 CAPLUS
CN Pentanoic acid, 5-[[1-[3-[[(4-chlorophenyl)sulfonyl]amino]phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



RN 166396-94-7 CAPLUS
CN Pentanoic acid, 5-[[1-[3-(acetylamino)phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



RN 166396-95-8 CAPLUS
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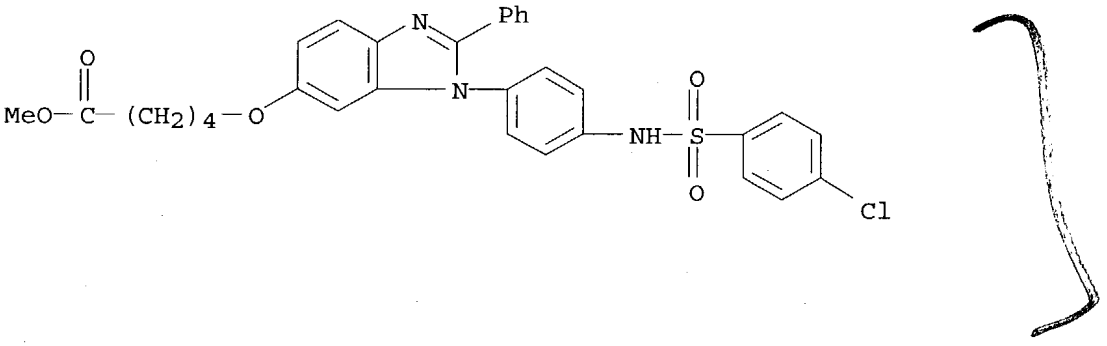
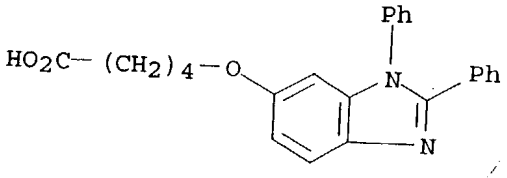
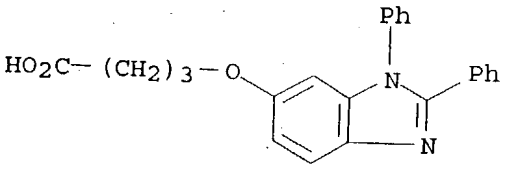


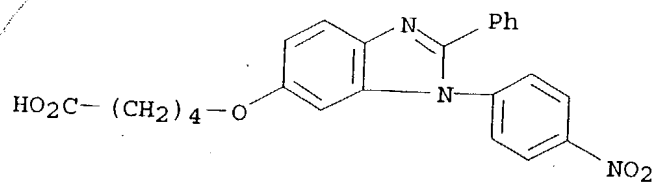
RN 166396-71-0 CAPLUS
CN Pentanoic acid, 5-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]- (9CI) (CA INDEX NAME)



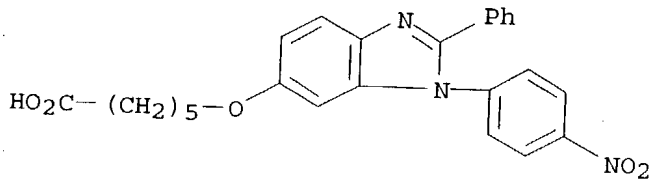
RN 166396-72-1 CAPLUS
CN Butanoic acid, 4-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]- (9CI) (CA INDEX NAME)



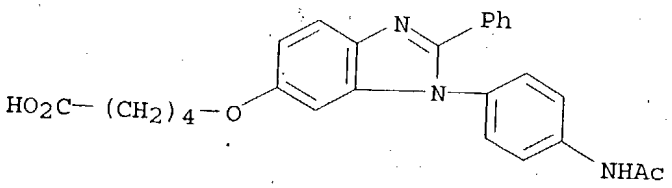
RN 166396-73-2 CAPLUS
CN Pentanoic acid, 5-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



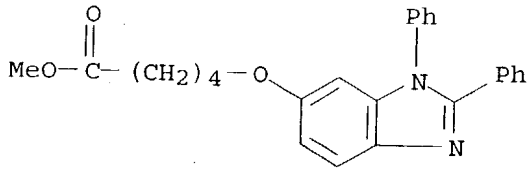
RN 166396-74-3 CAPLUS
CN Hexanoic acid, 6-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



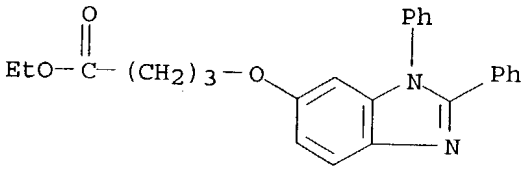
RN 166396-75-4 CAPLUS
CN Pentanoic acid, 5-[[1-[4-(acetylamino)phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



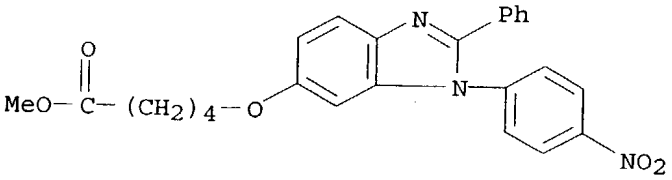
RN 166396-82-3 CAPLUS
CN Pentanoic acid, 5-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]-, methyl ester (9CI) (CA INDEX NAME)



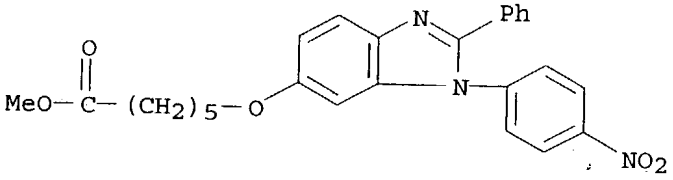
RN 166396-83-4 CAPLUS
CN Butanoic acid, 4-[(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]-, ethyl ester (9CI) (CA INDEX NAME)



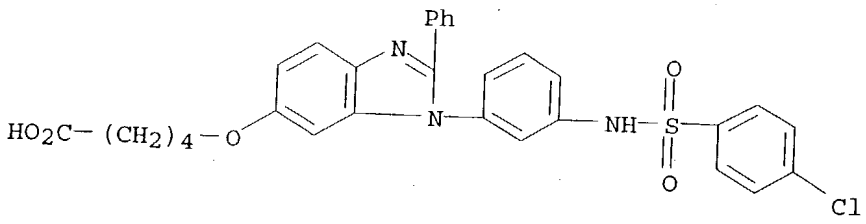
RN 166396-84-5 CAPLUS
CN Pentanoic acid, 5-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



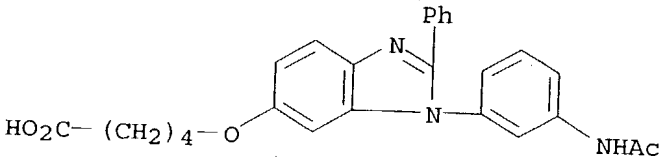
RN 166396-85-6 CAPLUS
CN Hexanoic acid, 6-[[1-(4-nitrophenyl)-2-phenyl-1H-benzimidazol-6-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



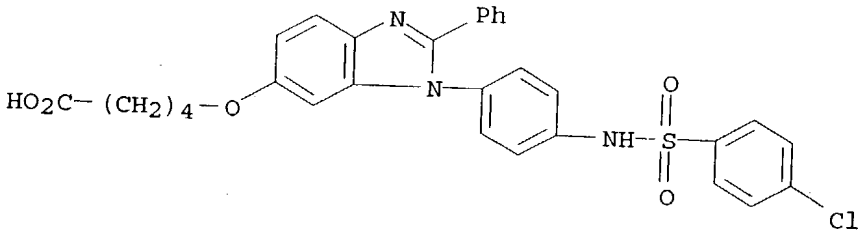
RN 166396-78-7 CAPLUS
CN Pentanoic acid, 5-[[1-[3-[[(4-chlorophenyl)sulfonyl]amino]phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



RN 166396-79-8 CAPLUS
CN Pentanoic acid, 5-[[1-[3-(acetylamino)phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



RN 166396-80-1 CAPLUS
CN Pentanoic acid, 5-[[1-[4-[[(4-chlorophenyl)sulfonyl]amino]phenyl]-2-phenyl-1H-benzimidazol-6-yl]oxy]- (9CI) (CA INDEX NAME)



IT **166396-81-2P 166396-82-3P 166396-83-4P**
166396-84-5P 166396-85-6P 166396-86-7P
166396-87-8P 166396-90-3P 166396-91-4P
166396-92-5P 166396-93-6P 166396-94-7P
166396-95-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of benzimidazoles as prostacyclin PGI2 mimetics)

RN 166396-81-2 CAPLUS
CN Acetic acid, [(1,2-diphenyl-1H-benzimidazol-6-yl)oxy]-, methyl ester (9CI) (CA INDEX NAME)